Review of Recent Literature

Adams, RM and Koenigsberg, SS, Lanhans RW, 1979. In vitro propagation of the butterwort *Pinguicula moranensis* H.B.K. HortScience 14: 701-702.

The authors describe an agar formula technique for successfully obtaining more rooted buds from leaves of the above species. The agar formula and methods are described in detail.

Adams, RM, and Langhans,RW.,cover by R. Scott Bennett, 1979. Carnivorous plants underexploited for indoor culture. HortScience 14: 678, 787, and color covers.

This article briefly describes CP useful for indoor culture, along with some general CP descriptions, functions and problems. There is a fine painting of five CP species in color on the cover. Reprints (the article on one side and the color painting reproduced double page on the other of heavy paper suitable for framing) are available at cost, $1.00 including postage, from: Dr. RW Langhans, Cornell Floriculture, 20 Plant Sciences Bldg., Ithaca, NY 14853.

Army Corps of Engineers, 1977, and 1979 (supplement). Wetland plants of the eastern United States. (Publication No. NADP 200-1-1 *with* supplement 1, US Army Corps of Engineers, North Atlantic Division, 90 Church St., New York City, 10007, both parts for $8.40, ppd.).

This interesting handbook was designed for ACE personnel to use in the field and is by the photo matching concept. Each wetland species for the area features a description and at least one, most often two, color photos. CP covered are *Drosera fififormis, D. intermedia, D. rotundifolia, Sarracenia purpurea* ssp. *purpurea,* and *Utricularia "cornuta"* (the photo actually shows *U. vulgaris!).* In addition to the CP, several hundred other wetland plants of interest are covered as well, including some native orchids. There will likely be further supplements. In spite of the *Utricularia* error identification, the set is well worth the low cost. Be certain to get both parts for the one price since the supplement is actually larger than the first portion, and contains the table of contents, index, corrections and bibliography. (DES)

Beaver, R.A., Biological studies of the fauna of pitchers plants *(Nepenthes)* in West Malaysia. Ann. Soc. Entomol. Fr. 15(1):3-18 1979.

The author describes 25 species of insects and 3 species of arachnids living in the pitchers of *N. albomarginata, N. ampullaria* and *N. gracilis* in Penang. The differences between the faunas of different *Nepenthes* species can be related to the habitats & pitcher structure. Most of the species have aquatic larvae that feed on nutrients in the pitcher liquor but one predator spider and one fly larvae actually catch insects entering or leaving the pitcher. Most of the insects (79%) breed only in the pitcher habitat and are termed nepenthebiont species.

Beaver, R. Description of the male and larvae of *Endonepenthia schuitemakeri,* new record, from *Nepenthes* pitchers. Ann Soc. Entomol. Fr. 15(1): 19-24. 1979.

A small two-winged fly of hunchback appearance (Diptera, Phoridae) was found living in *Nepenthes* pitchers in West Malaysia.

Dexhimer, J. Ultrastructural localization of enzymatic activities in the cells of the digestive glands of *Drosera capensis* during the mucigenic phase: Detection of glucos-6-phosphatase activity. Cytologia (Tokyo) 44(1): 153-160. 1979.

(Please turn to p. 38)

The author found that the majority of the enzyme activity was concentrated in the cell wall, in the zones where mucilage accumulate.

Grjebine, A. The mosquitoes living in the Malagasy pitcher plants: New species of the genus *Uranotaenia* (Diptera, Culicidae). Ann. Soc. Entomol. Fr. 15(1): 53-74. 1979.

Four new species of mosquito are described which exhibit faunistic differences depending if they live in the ground pitchers or the trumpet-like pitchers of taller plants. The mandibles of two of them are highly adapted to predation.

Kurahashi, H., Beaver, R. *Nepenthomyia malayana*, a new genus and species of calliphorid fly bred from the pitchers of *Nepenthes ampullaria* in West Malaysia. Ann Soc. Entomol. Fr. 15(1): 25-30. 1979.

The authors describe a large blow-fly of a new genus living in *Nepenthes* pitchers.

(Please turn to p. 49)

Carnivorous Plants Do Not Appear To Be Cannibals

by D.C. Speirs (Box 6830, Stn. D, Calgary, Alberta T2P 2E7, Canada)

In an 1879 issue of Gardener's Chronicle (Vol. 12, page 565) is an interesting note on *Nepenthes*. A plant was illustrated showing a young pitcher that pushed into an older pitcher and developed inside it. The interior pitcher was quite healthy and green, and it did not appear to be affected by the digestive juices of its host. For those of you who grow *Nepenthes*, this might make an interesting study, deliberately pushing young pitchers into older ones and seeing what happens. This could be done in two ways. Firstly, both pitchers might be from the same plant. secondly, each pitcher could be from a different plant or clone, to see if the host will attack the foreign pitcher.

In the century since this note was published, it appears that this unusual occurance has not been repeated. Because 1879 issues of Gardener's Chronicle are difficult to come by, the original sketch has been redrawn and is presented here, showing a cut-away view of the host pitcher with its companion inside.